# Wailuku Sugar Company

Wailuku Sugar Company was able practically to hold up its production to the level of 1919-20 during the past two years of labor shortage and the drought of last year which means that under normal conditions the company would, after years of struggles against untoward mishaps have practically reached the peak of its banner year, 1909, when a crop of 19,177 tons was bagged. The Iao Valley flood of 1915 gave it the chief set back from which it had to recover and on top of that came terrible droughts so that 1918 was its smallest crop in many a year, 10,271 tons.

In 1919-20 it recovered and increased its previous year's crop about 50 percent and in 1920-21, despite labor shortage it bagged 15,513 tons. This year with labor shortage to contend with and a late plant, deficient sucrose content from last year's drought, it still produced 14,168 tons on a curtailed acreage under cultivation. Areas were allowed to lie fallow rather than to attempt to partially cultivate them with an inadequate labor supply.

### Fine Organization

Manager Penhallow has worked efficiently, perfected an organization of which he might well be proud and is bringing the plantation up steadily. His organization has showed within the last year when several department heads, including the assistant manager were drafted to other plantations and he was able to fill their places "from the ranks," from the men he had trained previously.

The company has at the same time gone in for diversified agriculture and dairy farming for the benefit of its employes, has established dispensaries and nursing cottages and places for the caring of children and done much for the improving of the living conditions of workers in its camps.

### Early History

As far back as 97 years ago a Chinese named Hongtai is said to have made sugar at Wailuku and about that time or a little later a Spaniard named Catalina was making syrup at Waikapu. From then on various small mills of more or less primitive types were put up and used by different persons until in 1862 a steam mill was put up and operated by James Louzada and Harry Cornwell and about a year later the Wailuku Sugar Company put in a water power mill and another water power mill, the Lewers, at Waihee was installed about the same time.

In 1875 the Wailuku company was incorporated and the Baileys were bought out a little later. Waikapu Sugar Company was purchased in 1894 and later the Waihee company. Next the milling operations were centralized at Wailuku and steadily, almost ever since, this Brewer & Co., plantation has bettered its plant and its fields.

Betterments to the mill and machinery have slowed down with the universal system of economy adopted by the plantations of the Islands with the decline in the price of sugar but in other respects the progress is unchecked.

### Ditch Lining

The method of concrete slab ditch lining at Wailuku was originated by H. B. Penhallow.

In 1917 a problem of lining one of the Wailuku Sugar Company's main ditches with concrete was solved by using pre cast concrete slabs of suitable dimensions for handling. The chief advantage of this method was that it made it possible to keep the water flowing in the ditch most of the time, during the progress of the work, which was a necessity as the ditch was one of the main supply ditches and had to be kept in operation. Since that time over three miles of a sixty-five million gallon ditch have been successfully lined by this method at a cost no greater for concrete work than if it had been done as a part of original construction, as the concrete lining by the slab method could also be kept at a uniform quantity per lineal foot of ditch.

The form of slab used has a loose fitting tongue and groove joint to allow room for closing with cement plaster. The slabs were cast on platform moulds outside the ditch and later set in place in the flowing ditch, every second slab being supported by braces against the side of the ditch and with a concrete brace extending across the top of the ditch. When several hundred feet of slabs were in place, the ditch was shut off for ten or twelve hours, the joints plastered and the bottom poured in place for that distance. The space behind the slabs was filled with tamped earth. No special expansion joints have been found necessary.

Concrete lining allowed the use of a smaller cross section than the original dirt ditch, and speeded up the flow of water in addition to preventing seepage loss.

Considerable progress has been made at Wailuku, in cooperation with the H. S. P. A. Experiment Station both in developing seedlings of a superior quality and in seed selection from varieties already established.

In 1917 some ten thousand seedlings principally of Lahaina and H-109, were developed by Mr. J. T. Moir, Jr., and planted for observation. From these, through the process of careful selection which started the following year, we now have several which appear to excel H-109, and are planted in test plats in comparison with H-109 to determine that definitely. We also have extended a few of these seedlings in larger plats to be used for seed for further planting and will have mature cane to be ground this coming season—which will add further to our knowledge of them.

The original seedlings have been ratooned and continued for observation and purposes of comparison, as well as the various plats set out from the selected ones. In the more recent selection we took only those which yielded at the rate of one hundred tons of cane or better to the acre, and also had an acceptable quality ratio. Considerable stress was also given to the ratooning qualities which we were able to follow up through our various plats, which we now have up to third ratoons. Forty-eight seedlings have been numbered by the Experiment Station as Wailuku No. 1, Wailuku No. 2, etc., for convenience in keeping records, as our seedlings have been planted in other localities, and are being grown for comparison with other canes. A good many of these will eventually go into the discard, but the few which I believe will prove worth extending further will well repay all concerned for the work and care that has been required for their development.

Several hundred more seedlings were developed in 1920, but it is too early to have anything definite to report concerning them.

Seed selection work in H-109 was started here in July 1920 by Mr. W. G. Moir. This will have been reported on in detail and published in the "Record" prior to the meeting of the association, but in general we have several plats of carefully selected cane, chiefly of H-109, and some Lahaina, D-1135 Striped Mexican and Yellow Caledonia.

Through the process of reselection and additions, we now have sufficient selected cane planted to give us seed for our proposed plant for next season. The entire area looks very promising. This year we put in sixty-six acres of Lahaina from selected seed and have an unusually good stand of that cane.

A more careful selection of all seed was made this year and we believe will be of considerable value in a general way toward producing better cane. This broad selection of seed should give better material to work in for more intensive selection, thereby increasing the amount of better cane available for planting. Planting experiments have been put in over, experiments have been put in over accurate results, relating to spacing of seed and specially prepared seed.

Roster of plantation force:

H. B. Penhallow, manager.
J. A. Gibb, assistant manager.
Edwin Soper, overseer, Waihee division.
A. C. Peacock, overseeer, Wailuku division.
Frank L. Hoogs, overseer, Waikapu division.
George N. Weight, accountant and cashier.
Pak H. Wong, assistant bookkeeper.
Samuel Alo, statistian.
Leilani M. Weight, stenographer.
K. K. Kam, warehouse foreman.
J. S. Leval, timekeeper.
J. M. Johnson, mill engineer.
Douglas Stewart, assistant mill engineer.
Chas. P. Bento, sugar boiler.
David Kinney, assistant sugar boiler.
Joseph Federcell, chemist.
Harry S. Kaya, assistant chemist.
Joseph Smith, machinist.
Antone Aveira, railroad foreman.
G. A. Hansen, steam plow foreman.
M. S. Leval, stable foreman.
Wm. R. Bartels, surveyor.
E. D. Baldwin, special surveying.

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